STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number 134588

TO: Jason H Johnsen **Location: rem/5a44/5c18** **Art Unit: 1623** **Wednesday, October 06, 2004** **Case Serial Number: 10/762907**	**From: Peggy Ruppel** **Location: Biotech-Chem Library** **REMSEN 1B65** **Phone: 571-272-2557** **Peggy.Ruppel@uspto.gov**

Search Notes

The results of your search request are attached. Please contact me if you have any questions or comments.

Thank you for using STIC services.

Access DB# 135588

SEARCH REQUEST FORM

Scientific and Technical Information Center

RECEIVED
OCT -6 2004

Requester's Full Name: Jason Johnson Examiner #: 80613 Date: 10/6/04
Art Unit: 1623 Phone Number 571-272-3106 Serial Number: 10/762,907
Mail Box and Bldg/Room Location: 5A44 (office) Results Format Preferred (circle): PAPER DISK E-MAIL
5C18 Mailbox
If more than one search is submitted, please prioritize searches in order of need. ME

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Carbohydrate prodrugs of Fluorooxindoles

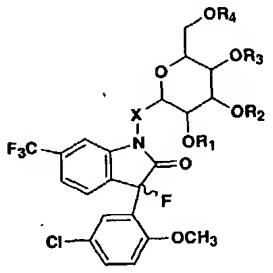
Inventors (please provide full names): Kevin Gillman & Danielle Bocchino

Earliest Priority Filing Date: 2/3/03

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number. Please search this compound for any known use for treatment or diagnosis of disease. Also, Please search as relates to large-conductance calcium activated potassium channels.

What is claimed is:

1. A compound of the formula



wherein the wavy bond (~) represents the racemate, the (R)-enantiomer or the (S)-enantiomer;

R^1, R^2, R^3, and R^4 each are independently hydrogen or $-P(O)OR^5OR^6$;

R^5 and R^6 each are independently hydrogen or C_{1-4} alkyl;

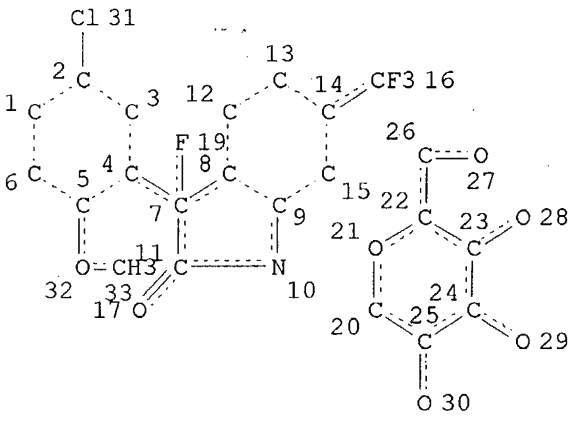
X is a covalent bond or $-CR^5R^6O-$;

or a nontoxic pharmaceutically acceptable salt or solvate thereof.

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher:	NA Sequence (#)	STN
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up	Bibliographic	Dr.Link
Date Completed:	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time	Other	Other (specify)

PTO-1590 (8-01)

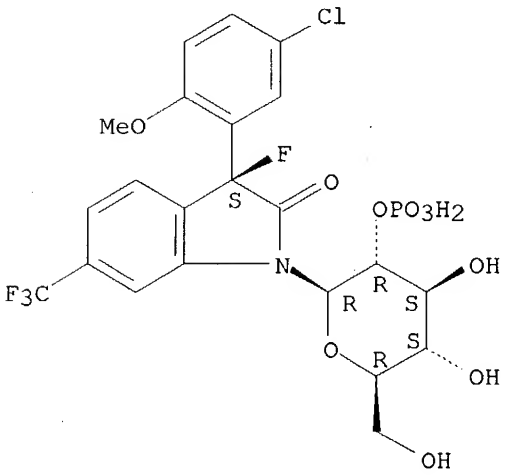
```
=> b reg
FILE 'REGISTRY' ENTERED AT 15:01:12 ON 06 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:     4 OCT 2004  HIGHEST RN 756793-93-8
DICTIONARY FILE UPDATES:    4 OCT 2004  HIGHEST RN 756793-93-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d que l14
L12                 STR
```




```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  32

STEREO ATTRIBUTES: NONE
L14             6 SEA FILE=REGISTRY SSS FUL L12


=> d ide l14 1-6

L14  ANSWER 1 OF 6  REGISTRY  COPYRIGHT 2004 ACS on STN
```

RN 728024-07-5 REGISTRY
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1,3-dihydro-1-(2-O-phosphono-β-D-glucopyranosyl)-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H21 Cl F4 N O10 P
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

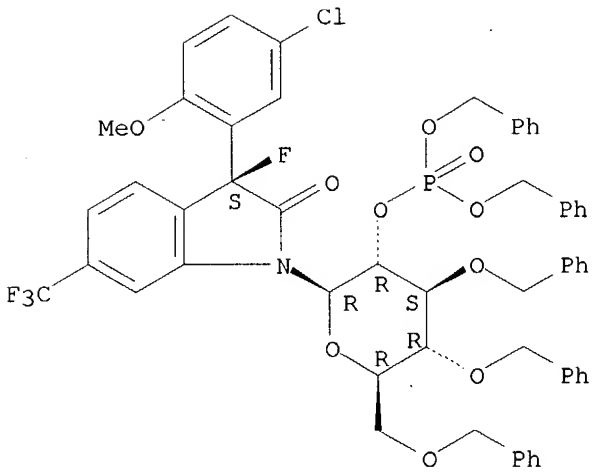


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 728024-06-4 REGISTRY
CN 2H-Indol-2-one, 1-[2-O-[bis(phenylmethoxy)phosphinyl]-3,4,6-tris-O-(phenylmethyl)-β-D-glucopyranosyl]-3-(5-chloro-2-methoxyphenyl)-3-fluoro-1,3-dihydro-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C57 H51 Cl F4 N O10 P
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

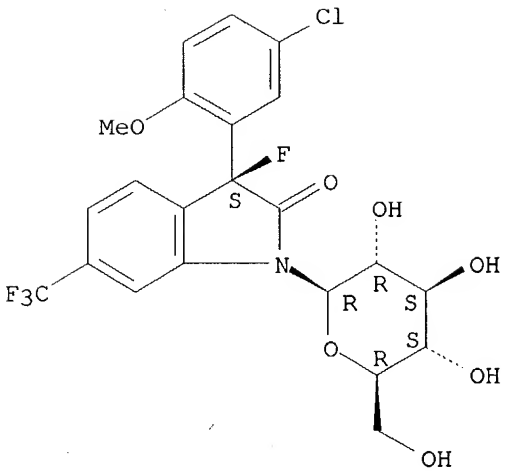


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 728024-05-3 REGISTRY
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1-β-D-glucopyranosyl-1,3-dihydro-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H20 Cl F4 N O7
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

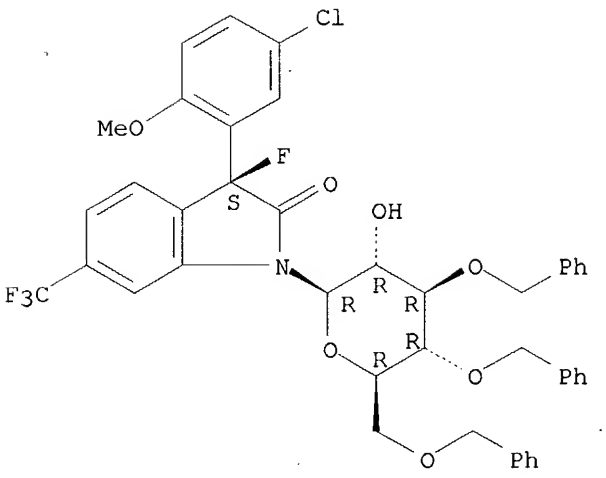


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 728024-04-2 REGISTRY
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1,3-dihydro-6-(trifluoromethyl)-1-[3,4,6-tris-O-(phenylmethyl)-β-D-glucopyranosyl]-, (3S)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C43 H38 Cl F4 N O7
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.



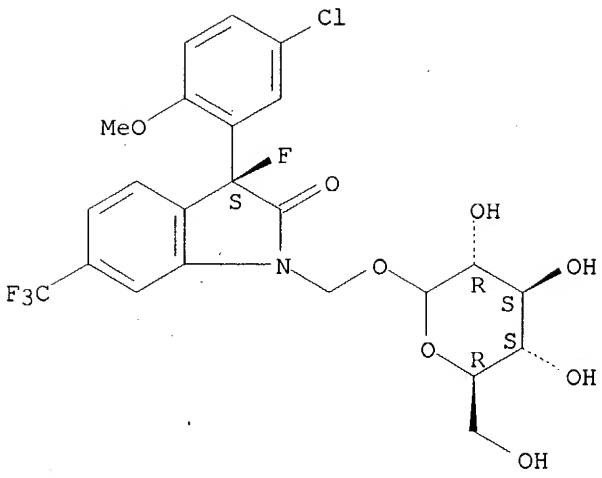
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 728024-03-1 REGISTRY
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1-[(D-glucopyranosyloxy)methyl]-1,3-dihydro-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C23 H22 Cl F4 N O8
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

Searched by P. Ruppel

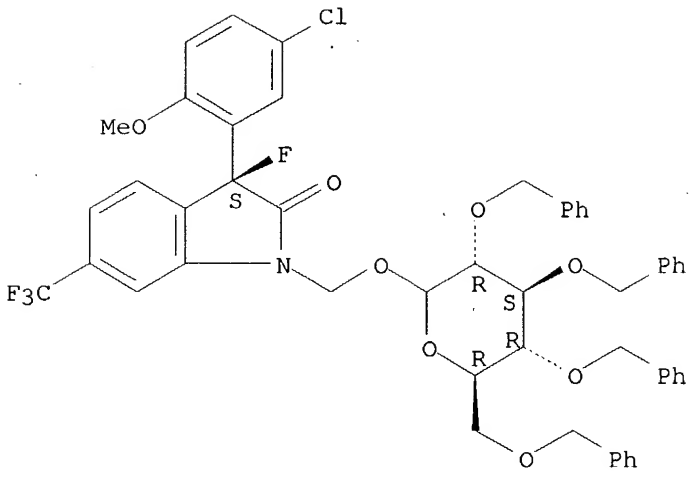


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 728024-01-9 REGISTRY
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1,3-dihydro-1-[[[2,3,4,6-tetrakis-O-(phenylmethyl)-D-glucopyranosyl]oxy]methyl]-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C51 H46 Cl F4 N O8
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

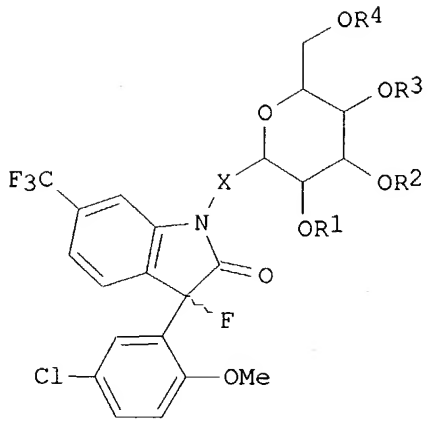
=> b home
FILE 'HOME' ENTERED AT 15:01:33 ON 06 OCT 2004

=>

```
=> b hcaplus
FILE 'HCAPLUS' ENTERED AT 15:01:42 ON 06 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)
```

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

```
FILE COVERS 1907 - 6 Oct 2004  VOL 141 ISS 15
FILE LAST UPDATED: 5 Oct 2004  (20041005/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que l15 nos
L12             STR
L14           6 SEA FILE=REGISTRY SSS FUL L12
L15           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14


=> d ibib abs hitstr l15

L15  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2004:633274  HCAPLUS
DOCUMENT NUMBER:          141:157385
TITLE:                    Preparation of monosaccharides prodrugs of
                          fluorooxindoles useful in treatment of disorders which
                          are responsive to the opening of potassium channels
INVENTOR(S):              Gillman, Kevin; Bocchino, Danielle M.
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 11 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     US 2004152646         A1    20040805    US 2004-762907           20040122
PRIORITY APPLN. INFO.:                       US 2003-444425P      P   20030203
GI
```



I

AB The present invention provides novel prodrug derivs. of fluorooxindoles I, wherein the wavy bond represents the racemate, the (R)-enantiomer or the (S)-enantiomer, R1-R4 are independently H, P(O)OR5OR6; R5 and R6 are independently H, alkyl; X is a covalent bond or -CR5R6O- are as defined herein, or a nontoxic pharmaceutically acceptable salt or solvate thereof and are useful in the treatment of human disorders which are responsive to the opening of potassium channels. Thus, phosphoric acid mono-[2-(R)-[3-(S)-(5-chloro-2-methoxy-phenyl)-3-fluoro-2-oxo-6-trifluoromethyl-2,3-dihydro-indol-1-yl]-4-(S),5-(S)-dihydroxy-6-(R)-hydroxymethyl-tetrahydro-pyran-3-(R)-yl]ester, was prepared and tested in rats for the treatment of disorders which are responsive to the opening of potassium channels. The disorders are ischemia, stroke, convulsions, epilepsy, asthma, irritable bowel syndrome, migraine, traumatic brain injury, spinal cord injury, carbon monoxide poisoning, sexual dysfunction, and urinary incontinence.

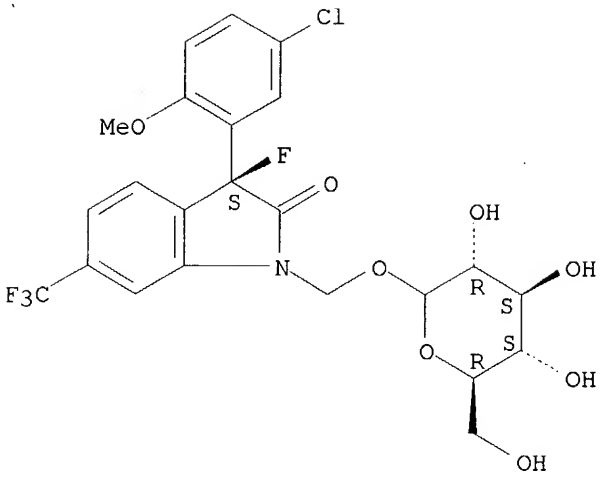
IT **728024-03-1P 728024-05-3P 728024-07-5P**
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of monosaccharides prodrugs of fluorooxindoles useful in treatment of disorders which are responsive to the opening of potassium channels)

RN 728024-03-1 HCAPLUS

CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1-[(D-glucopyranosyloxy)methyl]-1,3-dihydro-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)

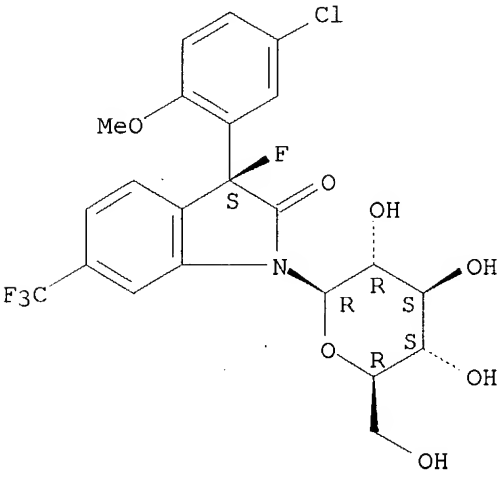
Absolute stereochemistry.

Searched by P. Ruppel



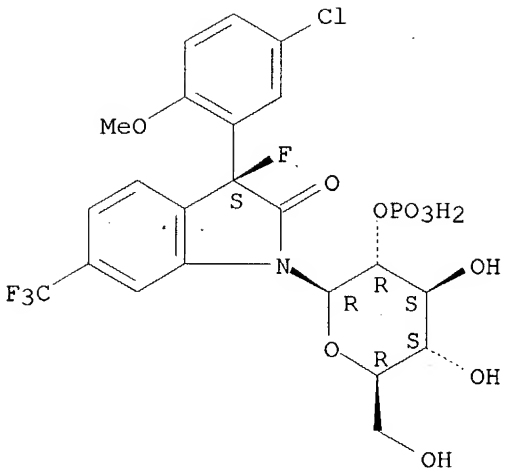
RN 728024-05-3 HCAPLUS
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1-β-D-glucopyranosyl-1,3-dihydro-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 728024-07-5 HCAPLUS
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1,3-dihydro-1-(2-O-phosphono-β-D-glucopyranosyl)-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)

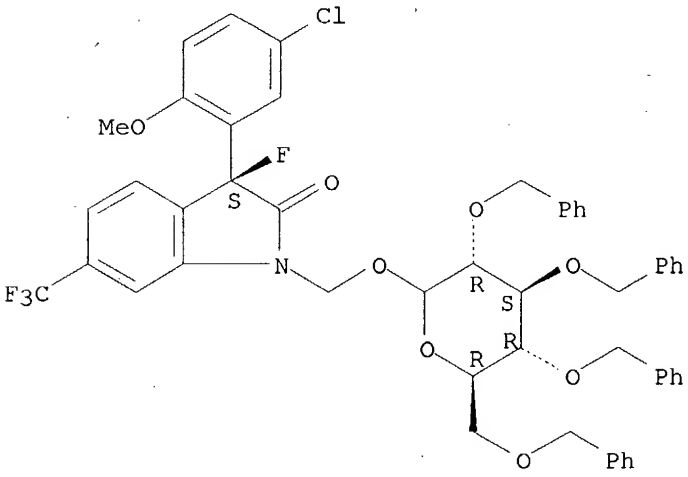
Absolute stereochemistry.



IT **728024-01-9P 728024-04-2P 728024-06-4P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of monosaccharides prodrugs of fluorooxindoles useful in treatment of disorders which are responsive to the opening of potassium channels)

RN 728024-01-9 HCAPLUS
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1,3-dihydro-1-[[[2,3,4,6-tetrakis-O-(phenylmethyl)-D-glucopyranosyl]oxy]methyl]-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)

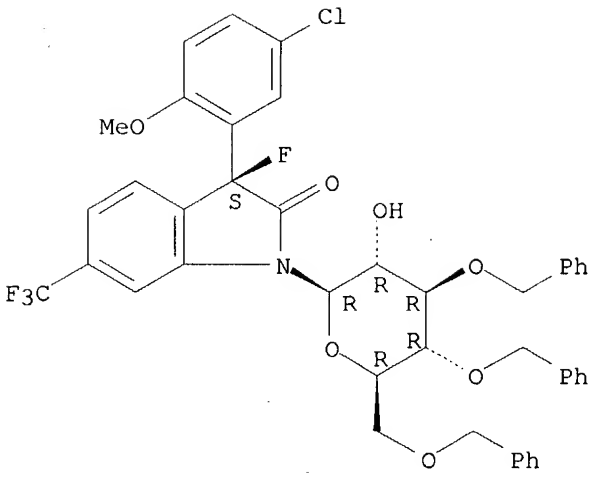
Absolute stereochemistry.



RN 728024-04-2 HCAPLUS
CN 2H-Indol-2-one, 3-(5-chloro-2-methoxyphenyl)-3-fluoro-1,3-dihydro-6-(trifluoromethyl)-1-[3,4,6-tris-O-(phenylmethyl)-β-D-glucopyranosyl]-, (3S)- (9CI) (CA INDEX NAME)

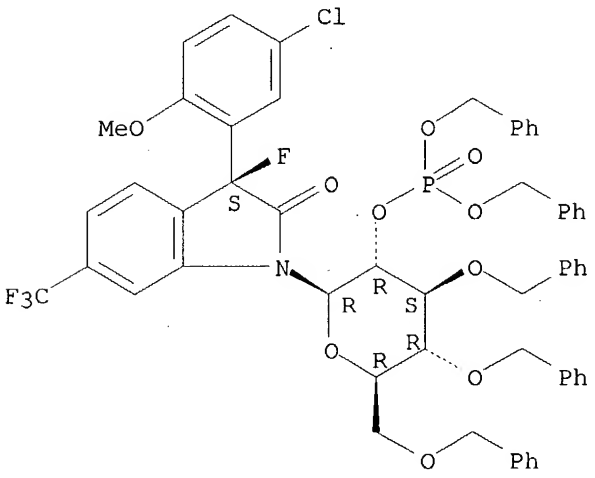
Absolute stereochemistry.

Searched by P. Ruppel



RN 728024-06-4 HCAPLUS
CN 2H-Indol-2-one, 1-[2-O-[bis(phenylmethoxy)phosphinyl]-3,4,6-tris-O-(phenylmethyl)-β-D-glucopyranosyl]-3-(5-chloro-2-methoxyphenyl)-3-fluoro-1,3-dihydro-6-(trifluoromethyl)-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> b home
FILE 'HOME' ENTERED AT 15:02:23 ON 06 OCT 2004

=>